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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM E. SPINDLER

Appeal 2009-002089
Application 10/607,227
Technology Center 1700

Decided¹: July 29, 2009

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
PETER F. KRATZ, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 37-80. We have jurisdiction pursuant to

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

35 U.S.C. § 6.

Appellant's claimed invention is directed to a method of cleaning and disinfecting a surface or an item of equipment. Appellant's method includes, among other things: (1) providing a specified cleaning kit including two containers each of which consists essentially of specified components; (2) providing a dry form cleaning composition consisting essentially of a peroxide; or (3) providing a dry form cleaning composition consisting essentially of a peroxide and an alkaline component.

Claims 37, 57, and 71 are illustrative and reproduced below:

37. A method of cleaning and disinfecting a surface or an item of equipment, comprising the steps of:

providing a cleaning kit comprising:

a first container consisting essentially of a peroxide; and

a second container consisting essentially of an alkaline component; and

applying the peroxide and the alkaline components of the first and second containers to at least one of the surface and the item of equipment to clean and disinfect the surface or item of equipment.

57. A method of cleaning and disinfecting a surface or an item of equipment, comprising the steps of:

providing a cleaning composition in dry form, the cleaning composition consisting essentially of a peroxide and an alkaline component; and

applying the cleaning composition in dry form to at least one of the surface and the item of equipment to clean and disinfect the surface or item of equipment.

71. A method of cleaning and disinfecting a surface or an item of equipment, comprising the steps of:

providing a cleaning composition in dry form, the cleaning composition consisting essentially of a peroxide; and

applying the cleaning composition in dry form to at least one of the surface and the item of equipment to clean and disinfect the surface or item of equipment.

The Examiner relies on the following prior art reference as evidence in rejecting the appealed claims:

Arbogast	5,739,327	Apr. 14, 1998
Rees	5,743,514	Apr. 28, 1998
Thompson	6,391,840 B1	May 21, 2002

Appellant presents rebuttal evidence in the form of a Declaration under 37 C.F.R. § 1.132 by William E. Spindler, the named inventor of the subject Application and the identified Real Party in Interest (*see* App. Br. 3 and the attached Evidence Appendix). Two Exhibits accompany the Declaration.

The Examiner maintains the following grounds of rejection²:

Claims 37-51, 53-66, 68-77, and 79 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Arbogast. Claims 37-47, and 53-55 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rees. Claims 37-51, and 53-56 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Thompson. Claims 52, 67, 78, and 80 stand rejected under 35 U.S.C.

² Rejections under the first and second paragraphs of 35 U.S.C. § 112 that were previously asserted by the Examiner are now withdrawn (Ans. 2).

§ 103(a) as being unpatentable over Arbogast. Claim 52 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Thompson.

We affirm the stated rejections. Our reasoning follows.

Anticipation Rejections

Appellant argues the anticipatorily rejected claims together as a group with respect to the Examiner's separate anticipation rejections over Rees and Thompson. Accordingly, we select independent claim 37 as the representative claim in deciding this appeal with respect to the anticipation rejections over Rees and Thompson.

Appellant mentions independent claims 37, 57, and 71 in arguing against the Examiner's anticipation rejection over Arbogast (App. Br. 9-11). However, Appellant generally argues the claims rejected over Arbogast together as a group (*id.*). Consequently, we shall also focus on claim 37 as a representative claim in considering the Examiner's anticipation rejection over Arbogast. We note that independent claims 57 and 71 have been considered separately, as representative claims for themselves and the rejected claims which depend thereon and with respect to the latter anticipation rejection, to the extent that claims 57 and 71 have been separately argued.

The Examiner urges that the "consisting essentially of" transitional phrase employed in claims 37, 57, and 71 does not exclude the nitrile bleach activator of Arbogast (Ans. 3-4). Similarly, the Examiner asserts that the claim phrase, "consisting essentially of" in claim 37 does not exclude the lactones of Rees and the imines or oxaziridines of Thompson (Ans. 5 and 6).

Appellant, on the other hand, argues that the aforementioned components of the applied references are excluded from the first and second containers of method claim 37 by the “consisting essentially of” transitional phrase as recited in independent method claim 37 (App. Br. 8-14; Spindler Decl., item Nos. 3-14). Similarly, Appellant argues that the nitrile of Arbogast is excluded from the provided dry form cleaning composition of remaining independent claims 57 and 71 (App. Br. 8-11; Spindler Decl., item Nos. 4-8).

PRINCIPAL ISSUE

Has Appellant identified reversible error in the Examiner’s rejections by the presented rebuttal evidence and argument directed to the exclusionary meaning that Appellant urges should have been ascribed to the transitional term “consisting essentially of” as this term is employed in the rejected independent claims?

PRINCIPLES OF LAW

On appeal to this Board, Appellant must show that the Examiner erred in finally rejecting the claims. *Cf. In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006); *see also* 37 C.F.R. § 41.37(c)(1)(vii).

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

Pending claim terms are given their broadest reasonable construction as they would be understood by one of ordinary skill in the art when read in light of the Specification. “When the applicant states [in his or her

specification] the meaning that the claim terms are intended to have, the claims are examined with that meaning” *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989).

The “phrase ‘consisting essentially of’ limits the scope of a claim to the specified ingredients and those that do not *materially affect* the *basic* and *novel* characteristic(s) of a composition.” *In re Herz*, 537 F.2d 549, 551-52 (CCPA 1976) (emphasis added); *see also PPG Indus., Inc. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1354 (Fed. Cir. 1998) (“By using the term ‘consisting essentially of,’ the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention”).

It is appropriate that Appellant bears the burden of establishing that the basic and novel characteristics of their claimed invention would be materially affected by, or at least reasonably expected to be materially affected by, any component or step of an applied reference that is argued to be excluded by a “consisting essentially of” transitional phrase used in the claims. *See In re De Lajarte*, 337 F.2d 870, 873-74 (CCPA 1964); *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (BPAI 1989).

FINDINGS OF FACT

Arbogast

The Examiner has found that Arbogast “teach[es] a method of cleaning hard surfaces comprising a first chamber comprising hydrogen peroxide and a second chamber comprising an alkaline solution” (Ans. 3; Arbogast, col. 9, ll. 15-65). In this regard, Arbogast discloses a dual chamber delivery system for cleaning hard surfaces wherein an oxygen

source (hydrogen peroxide) and a nitrile activator are present together with other components in one container and an alkaline solution is placed in the other chamber (col. 9, ll. 17-42). Arbogast further discloses that the nitrile compound can be used with solid filler and “carried by or encapsulated in” “solid matrix” form (col. 9, l. 63- col. 10, l. 2).

Arbogast discloses nitrile compounds of specified formulas are used as activators together with a peroxygen source (hydrogen peroxide) to form peroxyimide intermediates (peroxyimide acids) (col. 5, ll. 30-40).

Also, Arbogast discloses the activators can be incorporated “into a liquid or [a] solid matrix for use in liquid or solid detergent bleaches by dissolving into an appropriate solvent or surfactant or by dispersing onto a substrate material.” (col. 7, l. 63 –col. 8, l. 6, col. 8, ll. 55-65).

Rees

Rees discloses specified lactones as bleaching enhancers, which are disclosed as being used together with peroxide in one container and alkaline material in another container in a method of cleaning materials, such as hard surfaces (col. 2, l. 30- col. 3, l. 52).

Thompson

Thompson discloses bleach activators, such as imine activators or oxaziridine activators, which are used together with a peroxygen bleach compound, such as hydrogen peroxide, in one container, and alkaline material in another container for use in a method of cleaning a surface by application of these materials thereto (col. 3, ll. 30-55, col. 4, l. 5-15, col. 4,

l. 30 - col. 5, l. 5, col. 5, ll. 39-57, col. 6, ll. 1-11, col. 8, ll. 55-62, col. 12, ll. 7-14, col. 12, ll. 44-54, and Examples 4 and 5).

In so doing, Thompson discloses that peroxygen compounds include organic or inorganic peracids and persalts, such as perborates, in addition to hydrogen peroxide (col. 5, ll. 39-50).

Specification

Appellant's Specification discloses that:

The invention comprises, in yet another form thereof, a method of cleaning a surface in a food processing environment, including the steps of: providing a cleaning compound consisting essentially of peroxide and an alkaline reactant, the alkaline reactant being selected to raise the pH of the cleaning compound into the alkaline range; and applying the cleaning compound to the surface.

An advantage of the present invention is that surfaces in a food processing environment may be effectively cleaned without substantial corrosive effects.

Spec. 3.

Appellant's Specification describes a variety of chemical additives that can be employed with the peroxide cleaning compound including "chelants, coupling agents, oxygen-stable dyes, and/or oxygen stable surfactants" (Spec. 4-5).

Appellant's Specification does not explicitly describe adding nitrile activators, lactones, or any other bleach activator, such as imines or oxaziridines to the cleaning composition or cleaning method described therein (*see generally* Spec.). However, the Specification provides that "[t]he cleaning compound generally includes a peroxide (peroxygen compound) and an alkaline reactant" (Spec. 3, ll. 22-23).

Declaration Under 37 C.F.R. § 1.132 by William E. Spindler

Mr. Spindler opines that the nitrile activators of Arbogast react with the active oxygen source thereof (a peroxide) to form a peroxyimide acid whereas Appellant's claims 37, 57, and 71 lack bleaching activators, such as nitrile (Decl. ¶¶ 6-8).

Mr. Spindler opines that lactones of Rees are used to enhance the bleaching rate of hydrogen peroxide by formation of peroxyacid in a neutral or alkaline environment whereas Appellant's claim 37 does not include a lactone (Decl. ¶¶ 9-11).

Mr. Spindler opines that the bleach activators in the compositions of Thompson react with peroxide under alkaline conditions to yield peracid as the bleaching species unlike the cleaning composition of Appellant's claim 37, which does not include bleach activators that generate peracid (Decl. ¶¶ 12-14).

Exhibit I (a web page from [www. Scienceinthebox.com](http://www.Scienceinthebox.com)), which is attached to the Declaration of Mr. Spindler, identifies several classes of bleaches known to be useful in laundry processes including hydrogen peroxide and peracids, which acids are disclosed as working similarly to hydrogen peroxide and which acids can be formed with bleach activators (Exhibit I, p. 2).

Exhibit II (Sang-Hoon Lim et al., *Performance of a new cationic bleach activator on a hydrogen peroxide bleaching system* (2004)) discloses that bleach activators enhance the potential oxidizing characteristics of hydrogen peroxide (Exhibit II, p. 1).

Mr. Spindler does not explicitly identify the basic and novel characteristics of the claimed process as relating to cleaning and disinfecting

based on oxygen release by peroxide (Decl. ¶¶ 8, 11, and 14). Mr. Spindler does not explicitly opine as to whether the peracids alleged to be employed by Arbogast, Rees, and Thompson for cleaning surfaces represent compounds that are peroxide compounds and/or whether these peracids release oxygen to clean and disinfect (*see generally* Decl.). Mr. Spindler does not explicitly opine as to whether the inclusion of bleach activators that form peracids, as employed by Arbogast, Rees, and Thompson, may be used as effective cleaners for surfaces in a food processing environment without substantial corrosive effects (*see generally* Decl.).

ANALYSIS

In light of our factual findings above, Appellant's arguments and Declaration evidence are not persuasive to establish that the basic and novel characteristic of the here claimed method is the release of oxygen by a peroxide to clean and disinfect. Rather, the Specification appears to suggest that the basic and novel characteristics of the claimed process relate to employing an alkaline material in addition to a peroxygen compound for cleaning a surface while raising the pH of the cleaning materials to an alkaline level such that corrosion is reduced (Spec. 3).

Appellant has not fairly established that the inclusion of a bleach activator as taught by each of the anticipatorily applied references together with a peroxide would have been expected to detrimentally impact the asserted advantage of effective cleaning without significant corrosive effects alleged for the claimed process (Spec. 3; *see generally* App. Br. and Decl.).

Indeed, Appellant's Specification provides that "[t]he cleaning compound generally includes a peroxide (peroxygen compound) and an

alkaline reactant” which does not limit the active bleaching chemical to exclude peracids, which are peroxygen compounds (Spec. 3, l. 22-23). This is in accord with Thompson, one of the anticipatorily applied references, which discloses that peroxygen compounds include organic or inorganic peracids and persalts, such as perborates, in addition to hydrogen peroxide (col. 5, ll. 39-50). Furthermore, each of the applied references employ alkaline material (reactant) in addition to a peroxygen compound for cleaning surfaces, as we noted above.

Given the above and for reasons set forth in the Examiner’s Answer, Appellant’s argument and evidence do not convince us that the “consisting essentially of” language employed in representative independent claim 37 requires exclusion of the bleach activators or enhancing compounds that are also used by Arbogast, Thompson, or Rees. Consequently, Appellant has not fairly established reversible error in the anticipation rejections of representative claim 37 over the above-identified references.

Moreover and to the extent that Appellant’s additional remarks directed at independent claims 57 and 71 present a separate argument that the nitrile of Arbogast is required to be excluded from the cleaning composition employed therein based on the “consisting essentially of” transitional phrase employed, we again note that the evidence and arguments furnished by Appellant with respect to this matter are not reasonably persuasive. This is because the presence of activators that form a different peroxy compound (a peracid such as peroxyimideic acid) from another peroxide compound has not been shown to materially affect the basic and novel aspects of the claimed invention, or shown to reasonably be expected to behave so. In this regard, the weight of the evidence of record conveys

that the basic and novel characteristics of the claimed subject matter, including all of the argued independent claims, relates to the use of alkaline material in addition to a peroxygen compound in a cleaning material used in a surface cleaning process to reduce corrosion, not excluding peracids (or peracid forming adjuncts) as Appellant's basically argue.

In sum, Appellant's burden of production is not met by the presented Declaration of Mr. Spindler and attached Exhibits. This is because the tendered evidence does not furnish a reasonably persuasive showing establishing that the bleaching activators of the applied references would have materially affected the basic and novel characteristics of the claimed process for reasons explained above. Nor has Appellant presented any other argument that identifies reversible error in the Examiner's anticipation finding.

On this record, we sustain the Examiner's anticipation rejections.

Obviousness Rejections

As to the Examiner's separate obviousness rejection of dependent claims 52, 67, 78, and 80 over Arbogast and dependent claim 52 over Thompson, we note that Appellant relies on the arguments made against the anticipation rejection pertaining to independent claims from which these claims depend to allegedly establish error in the Examiner's obviousness determinations.

Given our determination that Appellant's arguments against the anticipation rejections are not persuasive, we shall also sustain the Examiner's obviousness rejections as no reversible error has been established therein, on this record.

CONCLUSION

Appellant has not identified reversible error in the Examiner's rejections by the rebuttal evidence and argument presented urging an exclusionary meaning for the transitional claim term "consisting essentially of" because Appellant has not established that the inclusion of the argued for excluded items of the applied references would have materially affected the basic and novel characteristics of the claimed process.

ORDER

The Examiner's decision to reject claims 37-51, 53-66, 68-77, and 79 under 35 U.S.C. § 102(b) as being anticipated by Arbogast; to reject claims 37-47, and 53-55 under 35 U.S.C. § 102(b) as being anticipated by Rees; to reject claims 37-51, and 53-56 under 35 U.S.C. § 102(b) as being anticipated by Thompson; to reject claims 52, 67, 78, and 80 under 35 U.S.C. § 103(a) as being unpatentable over Arbogast; and to reject claim 52 under 35 U.S.C. § 103(a) as being unpatentable over Thompson is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(v).

AFFIRMED

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